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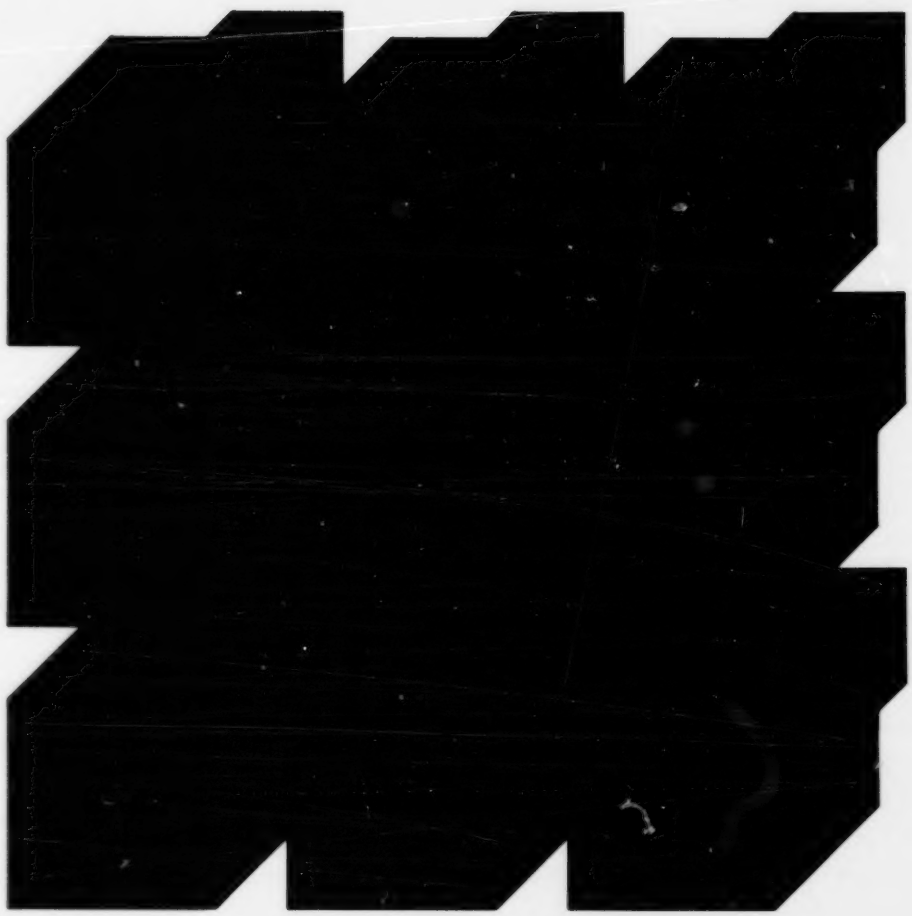

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DISCUSSION PAPER NO. 337

The Impact of Tax Reform on the Taxation of Corporate Investment Income

by

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RÉSUMÉ

Le but de cette recherche a consisté à évaluer l'incidence du budget fédéral de 1986 et du Libre blanc de 1987 en considérant surtout les mesures ayant trait à l'impôt sur le revenu d'investissement des sociétés. Il a fallu recourir au concept du taux d'imposition marginal effectif pour tenir compte de toutes les caractéristiques du régime d'impôt s'appliquant autant à l'entreprise qui investit qu'aux épargnants qui financent l'investissement. Certaines lacunes des propositions courantes de réforme fiscale sont analysées, notamment l'absence de mesures d'indexation, l'intégration incomplète des impôts des particuliers et des sociétés, ainsi que leurs effets potentiellement néfastes sur la masse de l'épargne et de l'investissement. Ce document compare également l'approche actuelle de la réforme fiscale à deux autres formules possibles, dont l'une comprend la pleine indexation et la complète intégration des impôts des particuliers et des sociétés, et l'autre, une combinaison des impôts fondés sur l'encaisse des particuliers et des sociétés.

ABSTRACT

The purpose of this paper is to evaluate the impact of the 1986 federal budget and the 1987 White Paper by concentrating on the provisions that influence the taxation of corporate investment income. This entails using the concept of a marginal effective tax rate to capture the features of the tax system that affect both the firm making the investment and the saver who finances the investment. Some shortcomings of the current tax reform proposals are discussed, notably, the absence of indexation provisions, the incomplete integration of corporate and personal taxes, and the potential adverse effect on aggregate saving and investment. The paper also compares the current approach to tax reform with two alternative approaches, one involving full indexation and complete integration of corporate and personal income taxes, and the other a combination of corporate and personal cash-flow taxes.

CONTENTS

	Page
FOREWORD	vii
ACKNOWLEDGEMENT	ix
1 INTRODUCTION	1
2 TAX REFORM MEASURES	3
3 METHODOLOGY	6
4 PRINCIPAL RESULTS	8
5 SOME SHORTCOMINGS OF THE TAX REFORM	13
6 THE ALTERNATIVE APPROACHES TO TAX REFORM	21
7 CONCLUSIONS	29
NOTES	31
TABLES	35

FOREWORD

This paper is a follow-up to the Council's three year study of the taxation of capital income -- or of the income derived from savings and investment. The study program had important dimensions in both time and space. The effects of capital taxation on both present and future output and standards of living were scrutinized. Taxes levied by all levels of Canadian government were studied as were the international implications of the taxation of capital income. Another important emphasis in the study program was on the interrelationship among specific measures of capital taxation. Here, general equilibrium and other techniques were used to examine the various measures as an interrelated system. Separate studies were also undertaken of specific measures of capital taxation including the personal and corporate income taxes, sales and transaction taxes, property taxes, and resource taxes.

An important aspect of the tax system has been the differential treatment of income from investment depending upon the type of asset acquired, the industry in which the asset is used, the manner in which the investment is financed, and the tax status of the saver supplying the funds. Such differences are reflected in marginal effective tax rates. This study investigates the impact of the federal government's White Paper on marginal effective tax rates.

Judith Maxwell
Chairman

September 1987

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1 INTRODUCTION

Much of the muddle into which Canada's tax system has drifted is due to the tax treatment of investment income. Various exemptions, deductions, and credits have been used to encourage specific kinds of saving and investment. Although many of these tax concessions may have been introduced for very good reasons and indeed, in some cases, possibly have achieved their objectives, their effects in aggregate on the pattern of investment incentives can be absurd. According to calculations by Daly, Jung and Schweitzer, for example, in 1985 effective tax rates on income from investment in the corporate sector ranged from 102 per cent to -78 per cent (an effective subsidy).[1] The overall outcome is a tax system that lacks both a consistent rationale and a coherent structure.

The manner in which investment income is taxed should be of concern to all Canadians. Departures from an evenhanded or neutral tax system involving preferential treatment to certain forms of capital income shift the tax burden onto wage earners, consumers, and recipients of other types of capital income who are not favoured by the tax system. Moreover, a non-neutral tax system diverts capital resources from their most productive uses -- that is those with the highest rates of return before taxes -- into activities that are less productive but yield greater after-tax returns because of the preferential tax

treatment they enjoy. Non-neutralities also encourage taxpayers (firms as well as individuals) and their advisors to devote real resources to the discovery of ways of converting one type of income into another (e.g., dividends into capital gains) in order to minimize their tax liabilities, which in turn create the need for further legal constraints to prevent tax avoidance. This leads to an unnecessarily complex and constantly changing tax system entailing real costs for firms, individuals, and the tax authorities. The result is less productivity and national output, and thus lower living standards for capital owners, wage-earners and consumers alike. Furthermore, the existing tax system as a whole discriminates against saving in favour of current consumption, tends to discourage investment, thus impeding economic growth and thereby jeopardizing future living standards of all groups in society.

One of the principal objectives of the federal government's recent White Paper entitled Tax Reform 1987 is to increase the neutrality of the tax system and ensure that decisions to save and invest are based on economic rather than tax considerations. This objective is to be achieved by broadening the tax base, through a reduction, and in some case removal, of certain tax concessions and lowering statutory tax rates. Such measures are designed to accelerate a process already begun as a result of changes announced in the 1986 federal budget.

The purpose of this paper is to examine the measures contained in the White Paper as well as in the 1986 budget, individually and as a package, in order to determine the extent to which they increase the degree of tax neutrality with respect to corporate investment. This involves using the concept of a marginal effective tax rate to capture the features of the tax system that affect both the firm making the investment and the saver who finances the investment.[2] The aspects of tax reform most amenable to marginal effective tax rate calculations are outlined in the next section.[3] Section 3 contains a brief description of methodology used to compute marginal effective tax rates. The impact of tax reform on both the level and the variation in effective tax rates is evaluated in Section 4. Some shortcomings of the current tax reform proposals are discussed in Section 5. Finally, two alternative approaches to tax reform are considered in Section 6. Our main conclusions are found in Section 7.

2 TAX REFORM MEASURES

The forerunner of current tax reform measures was a discussion paper tabled with the 1985 federal budget.[4] In that discussion paper, a number of changes to the corporate tax were proposed. Notable among these proposals were: 1) abolition of the investment tax credit (ITC), except in a few special cases, including scientific research expenditures; 2) removal of the 3 per cent inventory allowance; 3) reduced capital cost allowances

(CCAs); and 4) a cut of 7 percentage points in the basic federal statutory corporate tax rate. Moreover, plans to phase in a $500,000 lifetime exemption for capital gains were announced in the budget itself.

Subsequent to the 1985 discussion paper and as a preliminary to the White Paper, the 1986 federal budget announced a number of measures aimed at reducing the variation in marginal effective corporate tax rates.[5] The measures included: 1) the phasing out of the investment tax credit by 1989 except in a few special cases and designated areas; 2) immediate elimination of the inventory allowance; and 3) a gradual reduction in statutory corporate tax rates over a three-year period starting in 1987. In addition, the dividend tax credit was reduced from 50 to 33 1/3 per cent, effective January 1, 1987. Furthermore, a 3 per cent surtax was imposed on corporate and personal income.

Far broader measures designed to achieve a greater degree of tax neutrality are proposed in the 1987 White Paper, which is to be implemented in two stages. During the first stage, the basic federal statutory corporate tax rate will be reduced from 36 to 28 per cent on July 1, 1988. The tax rate applicable to manufacturing will be gradually reduced from 30 to 23 per cent in 1991, and the small business rate reduced to 12 per cent. The special tax deduction that further reduces the corporate tax rate for small manufacturers will, however, be eliminated so that the

tax rate on these small businesses will rise on July 1, 1988 from 10 per cent to the 12 per cent rate proposed for small businesses generally. At the same time, the incentive embodied in capital cost allowances will be curtailed. In particular, the 3-year write-off now accorded to investment in manufacturing machinery will be reduced to a 25 per cent declining balance rate. In addition, the proportion of corporate capital gains that is taxed will increase from its current level of one-half to two-thirds in 1988 and three-quarters in 1990. Moreover, a new tax will be applied to dividends from preferred shares if the earnings of the payor corporation are non-taxable. A 15 per cent tax will be levied on investment income accruing to fund insurance liabilities of life insurance companies.

At the personal level, federal tax rates will be reduced to three brackets; 17 per cent on the first $27,500 of taxable income, 26 per cent on the next $27,500, and 29 per cent on any additional taxable income. These reductions will be accompanied by the elimination of most exemptions and deductions, many of which will be converted into tax credits. The dividend tax credit will be further reduced to 25 per cent. The lifetime capital gains exemption will be fixed at $100,000 except in the case of farmland and small business shares, both of which will be eligible for a $500,000 lifetime exemption. However, the proportion of an individual's capital gains that is taxed will increase from the

current level of one-half to two-thirds in 1988 and to three-quarters in 1990 and subsequent years.

Finally, the base of the federal manufacturers' sales tax will be expanded pending its replacement with a multi-stage sales tax during the second stage of tax reform.

In the second stage of tax reform, the government proposes to replace the existing federal sales tax with a broad-based value-added tax that extends to the retail level. At the same time, not only will the present corporate and personal income surtaxes be removed, but personal tax rates will be reduced even further. The new sales tax will also be accompanied by an enriched refundable tax credit to assist low income households.

3 METHODOLOGY

The marginal effective tax rates found in this paper are derived from the cost of capital, as defined by Hall and Jorgenson,[6] using the methodology developed by King and Fullerton[7] and applied to Canada by Daly et al.[8] The <u>marginal effective tax rate</u> refers to taxes payable as a percentage of the pre-tax rate of a return on a prospective marginal investment project over its lifetime. A marginal investment is one whose returns are just sufficient to cover its costs; therefore, the marginal effective tax rate provides a useful measure of the incentive or disincentive

provided by the tax system to undertake a particular project. It should not be confused with the average effective tax rate, that is, the ratio of observed taxes paid to realized capital income. Although this rate is a useful measure of the tax burden on corporate profits, it is a poor indicator of the incentive to invest in a new project. A neutral tax system, by levying the same marginal effective tax rates on all investments, would not interfere with private investment and saving decisions.[9]

The estimates of marginal effective tax rates reported in the next section assume that all savers receive the same real rate of return before personal taxes on each project as on a bond yielding a real interest rate r. This is commonly known as the fixed-r case. Our calculations assume that r is equal to 5 per cent when inflation is zero, and that for every percentage point of inflation the nominal market interest rises by $1/(1-\bar{m})$ percentage points, where $\bar{m}$ is the weighted average of all savers' marginal personal tax rates.[10] We assume an expected inflation rate of 4.2 per cent, the average annual rate for the three-year period 1984-86 as well as the average rate predicted by the Economic Council of Canada for the period 1987-91.

An important difference from our previous work should, however, be noted.[11] The dividend tax credit is reflected in the marginal effective corporate tax rate rather than in the marginal effective personal tax rate because, presumably, no such credit would be

available if the corporate tax did not exist. In other words, the dividend tax credit is considered as an integral part of the corporate tax system.[12]

The capital stock, financing, and ownership weights used to compute weighted averages of marginal effective tax rates for each industry, type of asset, method of finance, and category of saver are exactly the same as those published in the article cited in footnote 1.[13] Note that we exclude the resource and financial service sectors.

4 PRINCIPAL RESULTS

1986 Federal Budget

The impact of the 1986 budget measures on marginal effective tax rates is summarized in Tables 1 and 2. Table 1 reports estimates of marginal effective corporate tax rates. Marginal effective total tax rates that take into account personal as well as the corporate taxes are reported in Table 2.

Column (1) of Tables 1 and 2 shows the tax rate in 1985 prior to tax reform. Tax rates vary enormously depending upon the type of asset acquired, the industry in which the asset is used, the manner in which the investment is financed, and the tax status of the investor supplying the funds for the investment. The

corporate tax system subsidized machinery compared to buildings and inventories because of accelerated capital cost allowances (CCAs) and the investment tax credit (ITC). The tax deductibility of interest payments on corporate debt and the 50-per-cent dividend tax credit resulted in investments financed with debt and new share issues being subsidized, whereas investments financed with retained earnings were taxed at the rate of 38.1 per cent. Consequently, marginal effective corporate tax rates by industry ranged from -9.8 per cent (an effective subsidy) in manufacturing to 17.1 per cent in gas distribution. Judging from the overall tax rate, the corporate tax system in 1985 provided a small subsidy amounting to 1.0 per cent to marginal investments. In other words, the corporate tax added nothing to the overall taxation of marginal investment because it was completely offset by allowances, deductions, and credits.

Once personal taxes are added to corporate taxes, machinery was taxed less than buildings, which in turn were taxed less than inventories. Investments financed by debt were taxed less than those financed by new share issues, and the latter were taxed slightly less than investments financed with retained earnings. Retained earnings were taxed more than new share issues because the preferential tax treatment of capital gains was less generous than the 50-per-cent dividend tax credit. Investments financed by savings channelled directly from households to companies were taxed a great deal more than those financed by savings channelled indirectly to companies through tax-exempt institutions or life

insurance companies. Investments channelled through life insurance were in fact subsidized. Finally, gas distribution was the most heavily taxed industry, whereas manufacturing was taxed the least.

Since the ITC is given mainly to investment in machinery, elimination of the ITC would cut in half the effective subsidy to machinery provided by the corporate tax system. It would also increase the marginal effective corporate tax rate on buildings from 8.5 to 12.0 per cent. Abolition of the inventory allowance more than doubles the effective corporate tax rate on inventory investment. On the other hand, cuts in statutory corporate tax rates reduce the effective tax rates on all broad categories of investment except those financed by debt and life insurance companies. These two exceptions arise because lower statutory tax rates reduce the value of interest and policy reserve deductions. The smaller dividend tax credit almost eliminates the effective subsidy provided by the corporate tax to investments financed with new share issues, and when personal and corporate taxes are taken into account, investments financed by new share issues become taxed more heavily than investments financed by retained earnings. The capital gains exemption reduces the marginal effective total tax rate on investment financed with retained earnings below that on investment financed with the new share issues.[14]

The weighted standard deviation shown in column (7) of Tables 1 and 2 indicates that the 1986 budget package as a whole would, if

fully implemented, considerably reduce the variation in effective rates, especially at the corporate level, and thus increase the neutrality of the tax system.

1987 White Paper (Stage One)

Tables 3 and 4 shows the changes in the pattern of marginal effective tax rates if some of the main changes proposed in the 1987 White Paper were implemented on top of the package announced in the 1986 budget.

A comparison between columns (2) and (3) reveals that the proposed reduction in CCAs would almost eliminate the effective subsidy to machinery provided by the corporate tax, thereby bringing the marginal effective tax rates (corporate and total) more into line with those on buildings and inventories. Lower statutory corporate tax rates would lead to lower effective tax rates on all broad categories of investment except those financed by debt and life insurance companies for precisely the same reasons as those mentioned in the previous section. Once again, the reduction in the dividend tax credit would increase the marginal effective corporate tax rate on investments financed with new share issues and thus increase further the discrepancy in marginal effective total tax rates applied to such investments compared to those financed with debt and retained earnings. The proposed changes in the personal tax structure would be felt mainly by households. Investments by households would be taxed at

an effective total rate of 46.9 per cent, rather than 43.6 per cent under the 1986 budget package. Moreover, investments financed by savings channelled through life insurance companies would face a dramatic increase in their marginal effective total tax rate, rising from -0.4 per cent under the 1986 budget package to 36.6 per cent with the 15 per cent investment income tax proposed in the White Paper.

As far as tax neutrality is concerned, reductions in CCAs and statutory corporate tax rates together with the life insurance tax would contribute to a reduction in the variation of marginal effective total tax rates, and thereby reduce the extent to which the tax system distorts savings and investment decisions. The reduction in the dividend tax credit and changes in personal tax rates would, however, have the opposite effect.[15]

1987 White Paper (Stage Two)

The main feature of the second stage of tax reform entails the implementation of a broad-based sales tax similar to a value-added tax (VAT). One of the principal advantages of such a VAT is that, unlike the federal manufacturers' sales tax and current provincial sales taxes, capital goods and other intermediate inputs would be exempt. However, since the burden of existing federal and provincial sales taxes levied on purchases of capital goods is borne entirely by machinery, such taxes tend to offset the

corporate tax system's bias in favour of investments in machinery that is attributable to accelerated CCAs. It follows, therefore, that replacement of either or both of the existing sales taxes with a VAT would increase the dispersion in marginal effective tax rates, as shown in columns (4) and (5) of Tables 5 and 6. Hence unless further steps were taken to reduce the generosity of CCAs permitted by the corporate tax, Stage Two of the White Paper could undo some of the tax neutrality accomplished in Stage One.

5 SOME SHORTCOMINGS OF THE TAX REFORM

Although the changes in the taxation of investment income announced in the 1986 budget and the 1987 White Paper constitute a major step toward a neutral tax system, some important non-neutralities would remain. Firms would still be able to write off certain investments for tax purposes long before the end of their economic lives and companies would still face different federal statutory corporate tax rates, depending on their size and the nature of their production activities. More importantly, however, the corporate and personal tax systems would continue to be extremely sensitive to inflation and the two tax systems would still not be fully integrated. Furthermore, saving and investment in the corporate sector as a whole could be discouraged. These shortcomings are in addition to the one mentioned at the end of Section 4, which points out that implementation of a more neutral sales tax would increase the variation in marginal effective tax

rates as long as non-neutralities exist elsewhere in the tax system.

Accelerated Capital Cost Allowances (CCAs)

As shown in Tables 3 and 4, even though the less generous CCAs proposed in the White Paper would reduce the variation in marginal effective tax rates by bringing the effective tax rate on machinery more into line with those on buildings and inventories, a significant gap would remain. This gap could be narrowed substantially if CCAs corresponded more closely to economic depreciation at replacement cost. Since the relatively generous CCAs accorded to machinery tend to compensate for sales taxes which are levied exclusively on purchases of machinery, further reductions in CCAs should accompany the proposed removal of sales taxes on capital inputs.

Non-Uniform Statutory Corporate Tax Rates

Desirable though the cuts in federal statutory corporate tax rates in the White Paper are, special low rates would still apply to manufacturing and processing activities (in the case of large firms only) and to small businesses. Withdrawal of these preferential tax rates would lead to more uniform federal statutory corporate tax rates and thereby diminish the variation in effective tax rates.

The Interaction of Inflation with the Tax System

Inflation has important but conflicting effects on marginal effective tax rates. It can increase, as well as decrease, effective tax rates. The result of these contradictory tendencies is a broadening of the range of variation in effective rates - a consequence that accentuates the distortion of investment decisions by taxes.

The tendency of inflation to increase the variation in marginal effective tax rates is especially pronounced in corporate taxation, and this tendency would remain, even if the proposals in the White Paper are implemented. As inflation erodes the real value of capital cost allowances, for instance, it tends to increase marginal effective corporate tax rates on depreciable capital such as machinery and buildings. In addition, inflation tends to increase the nominal value of inventories. Since firms must use first-in-first-out (FIFO) inventory accounting for tax purposes, the difference between the current sales price and the acquisition cost of inventories represents taxable profits. Thus inflation tends to increase nominal taxable profits and, consequently, the marginal effective corporate tax rate. As partial compensation, firms were formerly permitted an inventory allowance of 3 per cent, but this allowance was withdrawn by the 1986 federal budget.

As an offset, inflation increases nominal interest rates and hence interest payments on corporate debt. Since interest payments are deductible from taxable income, inflation decreases corporate taxes payable on debt-financed investments. At the same time, however, inflation tends to increase nominal interest receipts, resulting in payment of higher personal taxes. The two effects are not equal, however. Averaged over all investors, the marginal personal tax rate on interest income under the White Paper would be lower than the average statutory corporate tax rates (taking into account the special rates for manufacturing and small business, as well as the different provincial rates) for each industry.[16] The end result is encouragement for investments financed by debt, rather than by new share issues or retained earnings.[17]

Marginal effective tax rates under the White Paper and various expected inflation rates are reported in Tables 7 and 8. The tax rates in the zero-inflation columns would obtain if the proposed tax system were fully indexed. With inflation, marginal effective corporate tax rates on machinery and buildings decline, whereas tax rates on inventories increase. Tax rates on investments financed by debt and new share issues decline with inflation, while those on equity-financed investments increase. In all industries, marginal effective corporate tax rates would decline if inflation rose from 4.2 to 10 per cent.

Under the proposed tax system, marginal effective personal tax rates would tend to increase with inflation unless investments are channelled through tax-exempt institutions; the latter are, of course, not subject to personal taxes. As a consequence, when corporate and personal taxes are combined, inflation would increase marginal effective total tax rates for households and life insurance companies, all industries, all types of assets, and all types of finance, as shown in Table 8. The net result is that inflation would increase the overall marginal effective total tax rate on corporate investment income from 29.8 per cent with zero inflation to 51.8 per cent if inflation were expected to remain at 10 per cent.

What is more important in the present context, however, is the fact that inflation increases the marginal effective tax rate in some cases, and decreases it in others, thereby increasing the variation in rates. Although inflation has contributed less to the variation than the investment tax credit and accelerated capital cost allowances, it should be borne in mind that one factor behind the enhancement of these incentives during the 1970s and early 1980s was a desire to counteract inflation's adverse impact on corporate cash flows.[18] Thus ad hoc tax policy responses to inflation, as well as inflation itself, have contributed to the wide variation in marginal effective tax rates. Any repetition of past mistakes in this regard could be avoided by indexing the tax system. Indexation ought to be viewed as an

insurance policy against the damaging ramifications of a renewed outbreak of inflation. Unfortunately, even after tax reform, the tax system would remain extremely susceptible to inflation because it would still not be indexed.

Incomplete Integration of Corporate and Personal Taxes

The fact that interest costs but not equity costs are deductible for corporate tax purposes means that income from corporate equity is taxed twice - first at the company level and again at the personal level. This double taxation of equity income, which results in a bias in favour of debt-financed investments, is mitigated, however, by the dividend tax credit. Prior to the implementation of the 1986 budget, the credit was based on a dividend gross-up of 50 per cent and was therefore equivalent to one-third of grossed-up dividends. In effect, this meant that shareholders were deemed to have already paid income tax at the rate of 33.3 per cent. The 1986 federal budget reduced the credit from 50 per cent to 33.3 per cent, and the White Paper proposes a further reduction to 25 per cent. Consequently, as far as dividend income is concerned, shareholders in Canadian-controlled corporations will only be compensated for corporate taxes paid at the rate of 20 per cent. Since, according to the White Paper, statutory corporate tax rates (federal and provincial combined)

for large corporations would generally exceed 20 per cent, corporate and personal taxes would not be fully integrated.

A notable exception to this rule would continue to arise in the case of dividends paid to Canadian shareholders by non-taxpaying, Canadian-controlled corporations.[19] Unlike in other countries, such as the United Kingdom and France, where dividend tax credits are tied to a corporation's actual tax payments, in Canada shareholders receive the credit whether the corporation has paid taxes or not. Such a situation has in the past encouraged non-taxpaying corporations, including crown corporations, to issue preferred shares. The obvious solution to this problem is to allow credits only for taxes that companies have already paid. This could be accomplished by levying a tax on corporate profits when they are distributed, at a rate consistent with the dividend tax credit. For example, with a 33-1/3 per cent dividend tax credit, a 25 per cent tax ought to be levied at the corporate level on distributed dividends which would be fully creditable against corporate income taxes (with carryback and carryforward). In effect, the tax would constitute a minimum tax on corporate profits distributed as dividends. Unfortunately, the government's proposed tax on dividends paid on taxable preferred shares only addresses part of the problem.

Aggregate Saving and Investment

Despite the more efficient allocation of capital among different uses achieved through tax reform, the increase in overall marginal effective corporate tax rate (inclusive of business property taxes and sales taxes) from 16.2 to 23.1 per cent as a result of the 1986 budget, and the further increase from 23.1 to 26.0 per cent following implementation of phase one of the White Paper could have an adverse effect on investment in the corporate sector as a whole in the long run. The greater the mobility of capital between Canada and the rest of the world, the more relevant are taxes at the corporate level (as opposed to the personal level) for investment decisions.[20] Insofar as capital is internationally immobile, however, marginal investment is necessarily financed by domestic savings, in which case domestic saving and investment decisions are interrelated.[21] In such a situation, the marginal effective total tax rate reflects the tax incentives both to save and to invest. Unfortunately, the marginal effective total tax rate on corporate investment would also rise as a consequence of phase one of the White Paper, which suggests that saving as well as investment would be discouraged by the tax system. On the other hand, removal of sales taxes levied on capital purchases, as envisaged in phase two of the White Paper, would attenuate the increase in effective tax rates and thereby mitigate the adverse impact of tax reform on saving and investment.

6 THE ALTERNATIVE APPROACHES TO TAX REFORM

Much of the present muddle concerning the taxation of investment income derives from the absence of any clear view as to what principles do or should underlie it. The existing tax system involves a variety of different taxes, each with its own rules for determining tax liability. Separate taxes are levied on income, consumption, wealth, and economic rents. Specifically, corporate and personal taxes are ostensibly income-based, whereas sales taxes fall mainly on consumption. Property taxes may be viewed as a tax on a particular type of wealth, while resource taxes are levied on economic rent (the difference between the cost of extracting the resource and its value on world markets). The interaction between these taxes is difficult to comprehend, and because of this is rarely brought out into the open when tax changes are discussed. In addition, various exclusions and deductions result in many inconsistencies. Furthermore, there appears to be a lack of consistency in the principles underlying recent, as well as proposed, changes in the tax system. For instance, the base-broadening measures pertaining to the corporate tax contained in the 1986 federal budget and the 1987 White Paper are consistent with an income-based tax system. On the other hand, the planned relaxation of limits on RRSP contributions and the lifetime capital gains exemption, together with proposals for a federal multi-stage sales tax, constitute moves in the direction of a consumption-based tax system.

The only prospect for a fair and efficient tax system is to adopt one which is based on a small set of clear and consistent principles and which departs from them only in a limited and clearly-defined number of ways. The alternative to this course of action is to devise particular rules for each situation as and when it arises, as was the case, for example, when the rate of inflation accelerated during the 1970s. Since we cannot anticipate all possible situations or even fully appreciate the consequences of our last decision, these rules tend to proliferate and last indefinitely, even when the reasons for their introduction no longer exist.

Two very different approaches to the taxation of firms and individuals ought to be distinguished; the annual income tax approach, and the cash-flow approach. Each of these approaches will be discussed in turn.

An Annual Income Tax

The corporate and personal tax changes contained in the 1986 federal budget and the 1987 White Paper reflect the predominance of the principle that annual income is the appropriate base for direct taxation, the relaxation of RRSP limits notwithstanding. As we have seen earlier in this paper, a much greater degree of tax neutrality can be achieved by broadening the corporate and personal income tax bases and cutting statutory tax rates, along

the lines proposed by the federal government. However, tax neutrality with respect to corporate investment income could be enhanced even further if the principle of income taxation were more strictly adhered to. This would involve:

- capital cost allowances that correspond to the economic depreciation at current replacement cost;
- indexed inventory cost accounting;
- deductibility of real rather than nominal interest;
- lower and more uniform statutory corporate tax rates;
- complete integration of the corporate and personal income tax systems as far as dividends are concerned;
- full taxation of real capital income (including capital gains) and tax brackets at the personal level.

The first three measures together with the last would amount to full indexation of corporate and personal taxes, with respect to investment income, so that neither the corporate nor the personal tax structures would be sensitive to inflation.

The combined impact of these changes (including repeal of the investment tax credit) on marginal effective tax rates is shown in column 3, Tables 9 and 10. Such a tax reform package, which is similar to one recommended by the Economic Council of Canada, would reduce the variation in effective tax rates by much more than the package contained in the 1986 budget and the White Paper.

On the other hand, marginal effective corporate tax rates would be substantially higher under this package of tax measures than they would be if the White Paper is fully implemented. Higher marginal effective corporate tax rates tend to discourage aggregate investment.[22] On the other hand, the overall marginal total tax rate would be slightly lower than that prevailing after implementation of phase one of the White Paper, which would tend to result in relatively more saving and investment.

Cash Flow Taxes

Much of the present mess involving the tax treatment of capital income can be attributed to the fact that the principle underlying the direct taxation of companies and individuals has been that "income" is the appropriate tax base. Unfortunately, this principle encounters a number of practical difficulties because income is not an easy concept to define precisely or to measure objectively, especially on an annual basis. In particular, true economic depreciation is extremely difficult, if not impossible, to measure precisely. Moreover, at the personal level, a truly comprehensive annual income tax would require the full taxation of capital gains accruing annually, imputed rent on owner-occupied housing, as well as imputed returns on pension funds, all of which are clearly impracticable. Hence, serious divergencies from tax neutrality, together with widespread inequities, are inevitable as long as direct taxes are based on the concept of annual income.

The most desirable tax system, from a neutrality standpoint, consists of (a) a corporate cash-flow tax, under which all investment outlays would be immediately expensed ("free" depreciation) and interest payments would not be deductible;[23] and (b) a personal cash-flow tax. A tax system of this kind has been advocated by the report of the Meade Committee in the United Kingdom and explored by the Economic Council of Canada.[24]

The combination of personal and corporate cash flow taxes would reduce both corporate and personal marginal effective tax rates on capital income to zero and thus eliminate the dispersion in tax rates caused by the existing corporate and personal tax systems (see column 4 of Tables 9 and 10).[25] The combination would therefore also eliminate the double taxation of savings associated with the current tax system, so that the choice between present consumption or saving for future consumption would no longer be distorted.[26] Moreover, if personal and corporate taxes were tied to cash flows, the problem of capital income indexation would be entirely avoided.

Although the combination of corporate and personal cash-flow taxes is attractive from a tax-neutrality standpoint, there are, unfortunately, obstacles to a tax system of this kind, mainly at the corporate level. The most important obstacle in a net capital-importing country like Canada involves the uncertainty over the creditability of taxes under foreign tax systems -

particularly that of the United States, Canada's principal source of foreign capital. In particular, the greater the divergence between Canada's corporate tax base and those of countries investing here, the less likely are Canadian taxes on foreign-owned companies to be offset by foreign tax credits. This situation would tend to discourage foreign investment in Canada unless our tax treaties were renegotiated and unless foreign tax laws were amended, perhaps, to allow a degree of crediting similar to that which is currently permitted.[27] In view of the fact that it took about 10 years to conclude the existing Canada-U.S. tax agreement, both governments would probably be reluctant to renegotiate the treaty in the immediate future.

It is by no means clear, however that corporate cash-flow taxes paid in Canada by foreign investors would be noncreditable under foreign tax systems. In the United States, Treasury Regulation S1.901-1 states that a foreign tax is creditable only if it is based on "realized net income" and thus allows the recovery of significant costs and expenses, notable among which are interest payments. Under the type of cash-flow corporate tax base discussed up to this point, which was called an "R base" in the Meade Committee report, interest expenses would not be deductible.[28] Nevertheless, U.S. Treasury regulations also state that the non-deductibility of some expenses may be allowed, provided that other compensatory expenses are permitted. This would indeed be the case with the R-based cash-flow tax because

the immediate 100 per cent write-off for all investment expenditures constitutes full expensing, which is equivalent to properly formulated depreciation allowances and interest deductibility.

One could also argue that what ought to matter is the after-tax income patriated to the United States and thus subject to U.S. taxes. If the tax rate levied on corporate cash flows in Canada were set at a level that resulted in roughly the same amount of after-tax income being patriated by U.S. investors as at present - so that the cash-flow tax could be presented as a charge that is a substitute for, and comparable to, the existing corporate income tax - then the cash-flow tax could perhaps be declared creditable under U.S. Treasury regulations that allow for compensatory provisions. Interestingly, the overall marginal effective corporate tax rate of -1.0 per cent in 1985 (see column 1 of Table 1) is close to the zero rate that would prevail with a cash-flow tax base.

Changes in the treatment of interest receipts and payments associated with an R-based cash-flow tax could raise some other problems. Immediate disallowance of interest expenses could lead to difficulties for some highly leveraged companies where the more generous capital cost allowances resulting from immediate expensing would not be enough to compensate for the loss of interest deductions. This, of course, would be a transitional

rather than long-term problem, but a long-term problem does arise with respect to financial institutions. Since the net receipts of interest by a company would no longer be taxable, banks and similar financial institutions would be tax-exempt unless they were required to cast their accounts in an appropriate fashion or were taxed under some system independent of the R base.

All of the foregoing problems associated with an R-based cash-flow corporate tax could be addressed by adopting an alternative type of cash-flow base, which the Meade Committee referred to as the "R+F base."[29] This base corresponds to the excess of inflows over outflows of funds with respect to "financial" as well as "real" transactions. It would include the proceeds from net borrowing, while net interest payments would be deductible.

An R+F base would have a number of advantages over an R base. If the non-deductibility of interest expenses under an R-based cash-flow corporate tax constituted a genuine obstacle to the creditability of such a tax in the United States and elsewhere, an R+F base might be a viable alternative. In addition, an R+F base could be achieved gradually in a step-by-step process and appear more like a development of the present system than a radical and unfamiliar change. For example, the 100 per cent write-off for capital expenditures and the inclusion of net borrowing in the tax base could be phased in together so as not to impose a sudden

extra burden on highly leveraged companies. An R+F-based tax would also cover financial institutions. It is noteworthy that a cash-flow tax of this kind was recently recommended in the United Kingdom by the Confederation of British Industry.[30]

We conclude, therefore, that the obstacles to Canada's possible adoption of a cash-flow type of corporate tax are not nearly as formidable as has sometimes been suggested.

7 CONCLUSIONS

While the package of measures contained in the 1986 federal budget and the 1987 White Paper would lead to a much more satisfactory tax treatment of investment income than we have at the present time, the resulting tax system would still be far from neutral with respect to savings and investment decisions. A significantly higher degree of tax neutrality could be achieved by adhering more closely to an annual income tax, as discussed in the previous section.

The most desirable form of direct taxation, from a neutrality standpoint is, however, a system based on cash flows. Such a system would not interfere unduly with investment decisions and would remove the bias against saving in favour of current consumption. Nor would it be sensitive to inflation, thereby obviating the need to index the tax system. Furthermore, the

NOTES

1 See Michael J. Daly, Jack Jung, and Thomas Schweitzer, "Toward a Neutral Capital Income Tax System" (November-December 1986), 34 Canadian Tax Journal 1331-1376.

2 See, Canada, Department of Finance, The White Paper, Tax Reform 1987, June 18, 1987, p. 2.

3 Some tax provisions are difficult to capture in marginal effective tax rates and will therefore be ignored in this paper. Such provisions include the personal minimum tax, general anti-avoidance rules, and the relaxation of limits on contributions to registered retirement savings plans.

4 See, Canada, Department of Finance, Budget Papers, The Corporate Tax System: A Direction for Change, May 1985.

5 See, Canada, Department of Finance, Budget Papers, February 1986.

6 See Robert Hall and Dale W. Jorgenson, "Tax Policy and Investment Behaviour" (June 1967), 57 American Economic Review 391-414.

7 See Mervyn A. King and Don Fullerton, eds., The Taxation of Income from Capital: A Comparative Study of the United States, the United Kingdom, Sweden, and West Germany (Chicago: University of Chicago Press, 1984).

8 See supra footnote 1 and Michael J. Daly, Jack Jung, Pierre Mercier, and Thomas Schweitzer, "The Taxation of Income from Capital in Canada: An International Comparison" (January-February 1987), 35 Canadian Tax Journal 88-117; Michael J. Daly and Jack Jung, "The Taxation of Corporate Investment Income in Canada: An Analysis of Marginal Effective Tax Rates" (August 1987), XX Canadian Journal of Economics 555-587.

9 This is only one of many possible definitions of tax neutrality. Neutrality in the strictest sense requires that neither the relative prices of goods and services nor the allocation of resources should depend on tax rates or other provisions of the tax system. Unfortunately, no tax is ever likely to conform to such a strict standard of neutrality. Hence, policy-makers have tended to rely instead on less strigent definitions of neutrality. The definition of neutrality involving uniform marginal effective tax rates on all investments is currently the most popular.

10 This does not necessarily mean that inflation adds more than point-for-point to nominal interest. It is instead a consequence for the standard used for comparison across inflation rates.

11 See supra footnote 8.

12 The marginal effective corporate tax rate is defined as $t_c = (p - x)/p$, where p is the rate of return on investment net of depreciation, and in the case of investment financed by new share issues $x = \rho\theta - \pi$, where ρ denotes an investment project's rate of return net of corporate taxes, θ is the dividend gross-up rate, and π the expected annual inflation rate.

13 See supra footnote 1, Tables 5, 6 and 7. The tax rates and investment tax credits used to compute effective tax rates are exactly the same as in Tables 1, 2 and 3 of the same study. As regards personal tax rates, data provided by the Department of Finance for 1984 show that when the $1,000.00 investment income deduction and the dividend tax credit are taken into account, interest and dividends were typically taxed at marginal rates of 31.8 and 13.4 per cent, respectively, and that realized capital gains were taxed at the rate of 21.1 per cent. The foregoing rates were assumed to apply in 1985 also.

14 Since no data were available concerning the marginal personal tax rate applicable to capital gains if there were a $500,000.00 lifetime exemption, it was assumed that the effective accrued tax rate would be zero. This assumption is a reasonable approximation. See William R. Lawlor, "Surplus Stripping and Other Planning Opportunities Worth the New $500,000.00 Capital Gains Exemption" (January - February 1986), 34 Canadian Tax Journal 49-110.

15 According to data provided by the Department of Finance, if the first stage of the White Paper were fully implemented, interest, dividends, and realized capital gains would be taxed at the marginal effective rates of 31.6, 27.0, and 10.3 per cent, respectively.

16 Averaged over all investors, the marginal personal tax rate or interest income would be approximately 27 per cent, whereas an averaging of statutory corporate tax rates (taking into account the special rates for manufacturing and small businesses, as well as the different provincial rates), shows a range of 27.2 to 40.2 per cent industry by industry.

17 See Jan Bartholdy, Gordon Fisher, and Jack Mintz, "Taxation and the financial policy of firms: Theory and empirical applications to Canada," Economic Council of Canada, Discussion Paper 324, Ottawa, March 1987.

18 See Glenn Jenkins, "The impact of inflation on corporate taxes and the cash flows of business," Canadian Tax Journal 33 (July-August 1985):759-85.

19 All the marginal effective tax rates computed in this paper assume that firms are in a taxpaying position, and therefore able to take advantage of all their tax allowances.

20 The fact that gross foreign investment is substantial in many countries, including Canada, suggests that capital is mobile internationally. Nonetheless, there appears to be a very strong correlation between domestic saving and investment rates among OECD countries, a phenomenon which indicates that capital may not be perfectly mobile. (See Martin Feldstein and Charles Horioka, "Domestic Saving and International Capital Flows (June 1980), 90 The Economic Journal 314-29; Martin Feldstein, "Domestic Saving and International Capital Movements in the Long Run and the Short Run"A (March-April 1983), 21 European Economic Review 129-51; and L. Summers, "Tax Policy and International Competitiveness" (Cambridge, Mass.: National Bureau of Economics Research Working Paper, August 1986). This phenomenon may be partly explained by the fact that integration of corporate and personal taxes is a device used to encourage savers to invest at home rather than abroad.

21 Note that foreign investors are not eligible for Canada's dividend tax credit. Consequently, they face higher marginal effective corporate tax rates than those shown in Tables 1, 3, 5, 7 and 9. For example, the overall marginal effective corporate tax rate applicable to foreign investors corresponding to those reported in Columns (1) to (5) of Table 5 would be 21.7, 26.9, 28.7, 24.0, and 26.2 per cent, respectively.

22 Note that the Economic Council also recommended a personal lifetime income tax which, if fully implemented, would greatly reduce the personal taxation of capital income and thus more than offset the increase in the overall marginal effective corporate tax rate.

23 A cash-flow business tax can thus be viewed as a tax on profits plus interest, under which all investment expenditures are immediately deductible.

24 See Institute for Fiscal Studies, The Structure and Reform of Direct Taxation, Report of a Committee chaired by Professor J. E. Meade, hereinafter referred to as the Meade Committee Report (London: Allen and Unwin, 1978); and Economic Council of Canada, "The taxation of savings and investment" (Ottawa, 1987).

25 Under a personal expenditure tax, individuals would pay taxes on capital income when they spent it on consumption. A personal tax that exempted all capital income in conjunction with a cash-flow corporation tax would give a similar result.

26 An identical result would be obtained if income accruing from nonregistered savings were tax-exempt and if all restrictions on RRSP contributions (and withdrawals) were removed. See M. J. Daly, and F. Naqib, "Designing a nondistortionary personal tax system for Canada," Economics Letters 18 (1985):209-12.

27 To the extent that new investment by subsidiaries of foreign companies operating in Canada is financed out of their Canadian earnings, the disallowance of the deduction for interest expenses under a cash-flow corporation tax would have little impact on foreign investment in Canada. During the period 1975-79, more than 90 per cent of the growth of direct investment in Canada was financed with reinvested earnings.

28 The Meade Committee, Reform of Direct Taxation, p. 230.

29 The Meade Committee, Reform of Direct Taxation, p. 233.

30 Confederation of British Industry, Tax-Time for Change (London: December 1985).

Table 1
Marginal Effective Corporate Tax Rates
(1986 Federal Budget)

	1985	No ITC	No inventory allowance	Reduced corporate tax rates	33-1/3 % dividend tax credit	Capital gains exemption	1986 budget package[a]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Industry:							
Construction	7.5	8.0	8.9	6.1	8.8	5.9	7.8
Transportation	9.5	13.5	9.6	7.3	11.5	6.4	10.9
Storage	-1.9	0.4	6.5	-2.8	0.0	-6.4	5.7
Communications	13.6	13.7	13.7	11.2	15.5	10.1	10.1
Gas distribution	17.1	17.1	17.5	14.5	18.9	13.7	14.0
Trade	-0.3	0.6	14.3	-1.2	1.4	-4.0	12.9
Commercial services	-7.5	-5.0	-7.0	-8.0	-5.7	-10.7	-6.1
Manufacturing	-9.8	1.0	-0.6	-11.9	-7.1	-15.6	5.7
Assets:							
Machinery	-24.3	-11.7	-24.3	-24.7	-21.5	-30.7	-13.5
Buildings	8.5	12.0	8.5	6.2	10.5	5.1	8.9
Inventories	14.6	14.6	32.3	12.5	16.3	11.5	29.7
Method of finance:							
Debt	-63.0	-54.6	-49.4	-54.8	-63.0	-63.0	-37.2
New share issues	-28.2	-21.7	-20.8	-35.2	-3.6	-28.2	0.6
Retained earnings	38.1	41.2	41.6	34.7	38.1	40.3	44.3
Ownership:							
Households	-1.8	3.6	5.3	-3.6	0.4	-7.5	6.7
Tax-exempt institutions	5.3	9.2	9.6	3.2	7.1	5.3	12.5
Life insurance companies	-22.8	-15.9	-12.7	-20.3	-21.5	-22.8	-5.1
Overall tax rate	-1.0	4.1	5.6	-2.8	1.1	-5.2	7.5
Weighted standard deviation	68.6	54.9	69.7	58.8	67.8	69.7	49.3

a including $500,000 lifetime capital gains exemption.

Table 2

Marginal Effective Total Tax Rates
(1986 Federal Budget)

	1985	No ITC	No inventory allowance	Reduced corporate tax rates	33-1/3 % dividend tax credit	Capital gains exemption	1986 budget package[a]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Industry:							
Construction	43.6	43.9	44.4	42.8	44.2	39.0	40.1
Transportation	43.0	45.5	43.0	41.6	44.0	34.9	37.8
Storage	37.3	38.7	42.5	36.8	38.3	29.6	37.5
Communications	45.8	45.9	45.9	44.3	46.8	38.1	37.9
Gas distribution	47.8	47.8	48.0	46.2	48.7	40.0	40.0
Trade	38.4	39.0	47.4	37.9	39.3	31.5	42.5
Commercial services	34.2	35.7	34.4	33.9	35.0	27.5	30.4
Manufacturing	30.7	37.5	36.5	29.4	32.1	19.3	33.9
Assets:							
Machinery	22.2	30.1	22.2	22.0	23.7	10.5	22.0
Buildings	42.8	44.9	42.8	41.4	43.8	35.0	37.4
Inventories	47.0	47.0	58.0	45.7	47.8	40.4	52.5
Method of finance:							
Debt	6.5	11.3	14.3	11.2	6.5	6.5	21.3
New share issues	51.3	53.8	54.1	48.8	59.4	51.3	61.1
Retained earnings	51.8	54.3	54.6	49.3	51.8	39.1	43.3
Ownership:							
Households	45.0	47.9	48.9	44.0	46.2	35.0	43.6
Tax-exempt institutions	10.5	14.2	14.6	8.5	10.5	10.5	15.8
Life insurance companies	-19.1	-12.5	-9.4	-13.7	-19.1	-19.1	-0.4
Overall tax rate	36.9	40.1	41.1	35.8	38.0	28.2	36.7
Weighted standard deviation	43.6	35.2	44.1	37.4	43.9	41.1	29.2

a including $500,000 lifetime capital gains exemption.

Table 3

Marginal Effective Corporate Tax Rates
(White Paper, Stage One)

	1985	1986 budget package	CCA reduction	Reduced corporate tax rates	25 % dividend tax credit	New personal tax structure	Life insurance tax	Stage one package
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Industry:								
Construction	7.5	7.8	10.7	6.4	8.5	8.5	8.6	11.0
Transportation	9.5	10.9	12.7	8.4	12.1	12.2	11.6	12.8
Storage	-1.9	5.7	8.2	3.8	6.7	7.2	6.7	8.9
Communications	13.6	10.1	12.7	6.9	11.3	11.8	10.9	12.4
Gas distribution	17.1	14.0	17.8	10.4	15.2	15.6	14.7	16.8
Trade	-0.3	12.9	13.9	10.7	13.7	13.7	13.6	13.8
Commercial services	-7.5	-6.1	-2.4	-6.2	-5.1	-4.7	-5.0	3.2
Manufacturing	-9.8	5.7	13.7	3.9	6.9	7.0	6.4	13.9
Assets:								
Machinery	-24.3	-13.5	-1.7	-13.7	-12.1	-11.5	-12.4	0.9
Buildings	8.5	8.9	11.9	6.8	10.0	10.3	9.7	12.7
Inventories	14.6	29.7	29.7	26.5	30.3	30.0	30.1	28.0
Method of finance:								
Debt	-63.0	-37.2	-30.9	-32.1	-37.2	-37.4	-35.2	-26.5
New share issues	-28.2	0.6	5.2	-5.2	10.1	0.6	0.7	9.9
Retained earnings	38.1	44.3	47.3	40.5	44.3	42.5	44.0	42.2
Ownership:								
Households	-1.8	6.7	11.5	4.6	7.9	8.3	6.7	11.7
Tax-exempt institutions	5.3	12.5	16.3	10.2	13.3	12.5	12.5	14.8
Life insurance companies	-22.8	-5.1	0.1	-2.4	-4.5	-5.1	15.5	19.0
Overall tax rate	-1.0	7.5	12.1	5.5	8.6	8.7	8.3	12.6
Weighted standard deviation	68.6	49.3	43.3	43.2	49.2	48.5	48.7	38.0

Table 4

Marginal Effective Total Tax Rates
(White Paper, Stage One)

	1985	1986 budget package	CCA reduction	Reduced corporate tax rates	25 % dividend tax credit	New personal tax structure	Life insurance tax	Stage one package
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Industry:								
Construction	43.6	40.1	41.9	39.3	40.4	41.9	41.0	43.9
Transportation	43.0	37.8	39.0	36.2	38.5	41.1	38.9	42.1
Storage	37.3	37.5	39.2	36.4	38.1	40.2	38.6	41.7
Communications	45.8	37.9	39.7	35.9	38.7	41.3	39.1	42.3
Gas distribution	47.8	40.0	42.7	37.7	40.7	43.4	41.1	44.8
Trade	38.4	42.5	43.2	41.2	42.9	44.5	43.4	45.0
Commercial services	34.2	30.4	32.8	30.4	30.9	33.0	31.6	38.5
Manufacturing	30.7	33.9	39.5	32.9	34.7	37.4	35.1	42.7
Assets:								
Machinery	22.2	22.0	30.1	22.1	22.8	26.1	23.5	34.9
Buildings	42.8	37.4	39.5	36.1	38.1	40.6	38.5	42.7
Inventories	47.0	52.5	52.5	50.5	52.9	54.2	53.2	53.3
Method of finance:								
Debt	6.5	21.3	24.9	24.2	21.3	20.9	22.4	27.2
New share issues	51.3	61.1	62.9	58.9	64.2	60.3	61.6	64.0
Retained earnings	51.8	43.3	46.3	40.0	43.3	48.7	44.4	49.7
Ownership:								
Households	45.0	43.6	46.5	42.3	44.3	46.9	43.6	48.8
Tax-exempt institutions	10.5	15.8	19.4	13.5	15.8	15.8	15.8	17.3
Life insurance companies	-19.1	-0.4	4.5	10.0	-0.4	-0.5	36.6	42.0
Overall tax rate	36.9	36.7	39.8	35.5	37.3	39.7	37.8	42.8
Weighted standard deviation	43.6	29.2	24.9	25.5	29.4	30.1	28.0	23.1

Table 5

Marginal Effective Corporate Tax Rates
(Including Sales and Property Taxes)

	1985	1986 budget package	1987 White Paper phase one	1987 White Paper phase two (national VAT)	1987 White Paper phase two (federal VAT)
	(1)	(2)	(3)	(4)	(5)
Industry:					
Construction	29.0	30.1	31.6	22.8	27.9
Transportation	23.0	25.1	25.8	22.9	24.5
Storage	12.5	18.9	21.0	18.8	19.8
Communications	30.9	29.7	30.5	21.7	26.1
Gas distribution	23.0	20.9	23.0	22.4	22.4
Trade	14.7	25.1	25.5	22.6	24.2
Commercial services	26.3	28.2	30.6	15.0	23.6
Manufacturing	5.3	17.8	23.9	20.7	21.7
Asset:					
Machinery	0.0	8.0	17.2	0.5	8.9
Buildings	30.4	32.1	33.3	33.3	33.3
Inventories	14.6	29.7	28.0	28.0	28.0
Method of Finance:					
Debt	-29.2	-12.5	-3.7	-11.5	-7.8
New share issues	-8.7	13.2	19.8	15.5	17.5
Retaining earnings	47.4	53.6	50.4	47.3	48.7
Ownership:					
Households	16.4	23.4	26.2	20.9	23.4
Tax-exempt institutions	17.4	23.1	24.8	20.6	22.6
Life insurance companies	2.1	13.5	28.6	24.6	26.5
Overall tax rate	16.2	23.1	26.0	21.0	23.4
Weighted standard deviation	57.0	41.9	31.4	36.3	33.8

Table 6

Marginal Effective Total Tax Rates
(Including Sales and Property Taxes)

	1985	1986 budget package	1987 White Paper phase one	1987 White Paper phase two (national VAT)	1987 White Paper phase two (federal VAT)
	(1)	(2)	(3)	(4)	(5)
Industry:					
Construction	56.7	54.5	56.9	51.3	54.5
Transportation	51.5	47.7	50.7	48.9	49.9
Storage	46.2	46.3	49.4	48.1	48.7
Communications	56.7	51.5	54.2	48.4	51.3
Gas distribution	51.5	44.9	48.9	48.5	48.5
Trade	47.6	50.5	52.5	50.6	51.7
Commercial services	54.2	52.9	55.9	46.0	51.4
Manufacturing	40.2	42.4	49.4	47.3	47.9
Asset:					
Machinery	37.4	36.8	45.7	34.6	40.2
Buildings	56.4	53.4	56.2	56.2	56.2
Inventories	47.0	52.5	53.3	53.3	53.3
Method of Finance:					
Debt	25.8	35.5	40.3	35.8	38.0
New share issues	58.7	66.0	67.9	66.2	67.0
Retaining earnings	59.1	52.8	56.9	54.1	55.4
Ownership:					
Households	54.8	53.7	57.2	54.2	55.6
Tax-exempt institutions	22.0	26.0	27.0	22.3	24.8
Life insurance companies	5.0	17.3	48.9	46.1	47.4
Overall tax rate	47.6	47.3	51.6	48.3	49.8
Weighted standard deviation	36.1	24.9	19.3	22.4	20.8

Table 7

**Marginal Effective Corporate Tax Rates[a]
Under 1987 White Paper and
Various Inflation Assumptions**

	Expected inflation rate		
	0 per cent	4.2 per cent	10 per cent
Industry:			
Construction	8.9	11.0	10.6
Transportation	16.0	12.8	2.0
Storage	12.7	8.9	-0.2
Communications	16.8	12.4	-1.4
Gas distribution	20.3	16.8	4.9
Trade	10.6	13.8	15.0
Commercial services	9.2	3.2	-11.5
Manufacturing	12.7	13.9	11.3
Asset:			
Machinery	4.2	0.9	-8.3
Buildings	18.4	12.7	-2.5
Inventories	17.9	28.0	35.1
Method of Finance:			
Debt	-8.4	-26.5	-51.4
New share issues	11.4	9.9	6.2
Retained earnings	29.0	42.2	52.5
Ownership:			
Households	12.5	11.7	5.6
Tax-exempt institutions	14.3	14.8	12.9
Insurance companies	17.2	19.0	18.0
Overall tax rate	12.8	12.6	7.8
Weighted standard deviation	20.2	38.0	64.2

a These rates encompass corporate taxes only.

Table 8

Marginal Effective Total Tax Rates[a] Under 1987 White Paper and Various Inflation Assumptions

	Expected inflation rate		
	0 per cent	4.2 per cent	10 per cent
Industry:			
Construction	28.4	43.9	55.1
Transportation	31.8	42.1	48.0
Storage	30.8	41.7	48.9
Communications	32.8	42.3	46.7
Gas distribution	35.3	44.8	49.6
Trade	29.2	45.0	56.7
Commercial services	28.3	38.5	43.5
Manufacturing	29.0	42.7	52.8
Asset:			
Machinery	22.7	34.9	43.2
Buildings	34.3	42.7	46.3
Inventories	34.3	53.3	66.4
Method of Finance:			
Debt	20.3	27.2	30.1
New share issues	45.2	64.0	76.7
Retained earnings	34.1	49.7	61.7
Ownership:			
Households	32.4	48.8	62.5
Tax-exempt institutions	15.8	17.3	16.0
Insurance companies	32.9	42.0	46.4
Overall tax rate	29.8	42.8	51.8
Weighted standard deviation	13.6	23.1	36.5

a These rates encompass corporate and personal taxes only.

Table 9

Marginal Effective Corporate Tax Rates[a] Under Alternative Approaches to Tax Reform

	1985	1986 budget and 1987 white paper	Indexed income tax	Cash-flow tax system
	(1)	(2)	(3)	(4)
Industry:				
Construction	7.5	11.0	15.3	0
Transportation	9.5	12.6	20.7	0
Storage	-1.9	8.9	16.9	0
Communications	13.6	12.4	20.0	0
Gas distribution	17.1	16.8	20.7	0
Trade	-0.3	13.8	16.5	0
Commercial services	-7.5	3.2	16.2	0
Manufacturing	-9.6	13.9	20.5	0
Asset:				
Machinery	-24.3	0.9	19.0	0
Buildings	8.5	12.7	19.7	0
Inventories	14.6	28.0	18.5	0
Method of Finance:				
Debt	-63.0	-26.5	-0.3	0
New share issues	-28.2	9.9	-0.4	0
Retaining earnings	38.1	42.2	33.1	0
Ownership:				
Households	-1.6	11.7	19.5	0
Tax-exempt institutions	5.3	14.8	18.3	0
Life insurance companies	-22.6	19.0	15.2	0
Overall tax rate	-1.0	12.6	19.1	0
Weighted standard deviation	68.6	38.0	16.7	0

a encompasses corporate tax only

Table 10

Marginal Effective Total Tax Rates[a]
Under Alternative Approaches to Tax Reform

	1985	1986 budget and 1987 white paper	Indexed income tax	Cash-flow tax system
	(1)	(2)	(3)	(4)
Industry:				
Construction	43.6	43.9	39.4	0
Transportation	43.0	42.1	43.8	0
Storage	37.3	41.7	40.7	0
Communications	45.8	42.3	43.2	0
Gas distribution	47.8	44.8	43.8	0
Trade	36.4	45.0	40.4	0
Commercial services	34.2	38.5	40.1	0
Manufacturing	30.7	42.7	43.7	0
Asset:				
Machinery	22.2	34.9	42.5	0
Buildings	42.6	42.7	43.0	0
Inventories	47.0	53.3	42.0	0
Method of Finance:				
Debt	6.5	27.2	26.7	0
New share issues	51.3	64.0	40.2	0
Retaining earnings	51.6	49.7	52.2	0
Ownership:				
Households	45.0	48.8	46.6	0
Tax-exempt institutions	10.5	17.3	21.2	0
Life insurance companies	-19.1	42.0	27.0	0
Overall tax rate	36.9	42.6	42.5	0
Weighted standard deviation	43.6	23.1	15.3	0

a encompasses corporate and personal taxes